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Processes and Properties Index

The influence of certain types of industrial occupation upon the osmotic stability of erythrocytes. I. B. Swulurko. *Arch. sci. biol.* (U. S. S. R.) 32, 91-8(1932).—The resistance of erythrocytes to laking by graduated concns. of NaCl solns. (0.52-0.28%) was measured before and after work in workers of 4 groups: (1) those operating with molten metals at high temp. and radiant energy, (2) those handling cold metals, (3) wood lathe workers, (4) heavy porter work. A sharply defined loss of resistance to hemolysis was found in group I. The order of increasing resistance was I < II < III < IV. Other data, not given in detail, indicate that the loss of resistance in group I is due to (or accompanied by) an increased acidosis.

W. A. PERLZWEIG

ASME-ISA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS																										3RD AND 4TH ORDERS																									
PROCESSES AND PROPERTIES INDEX																																																			
<p>1</p> <p>CPX</p> <p>Clinical significance of the insulin test of E. S. London. I. The insulin reaction in patients after insulin administration. M. I. Marbas and I. S. Chubukov. <i>Arch. sci. biol.</i> (U. S. S. R.) 37, 37-34 (in French 34-5) (1935). II. The reaction in diabetes after peroral administration of sugar. <i>Ibid.</i> 37-42 (in French 42-5). III. The reaction in diabetes after intravenous sugar administration. <i>Ibid.</i> 45-48 (in French 48); cf. London, C. A. 27, 2191. The injection of 40 units of insulin in normal and diabetic subjects resulted in the lowering of the blood sugar in the mice tested with the blood of these subjects. With 50 g. sucrose administered <i>per os</i> in the normal and mildly diabetic subjects a secretion of insulin was surmised from the lowering of the blood sugar in the test mice. The blood of the moderately severe and very severe diabetics after peroral administration of sugar when injected into mice caused a rise in the blood sugar; this indicates that no insulin secretion resulted and that possibly secretion of adrenaline occurred in these patients instead. With the intravenous administration of 15 g. of glucose in 40% solution, the insulin reaction was about equally positive in normal subjects and in all the diabetics regardless of the degree of severity of the disease. This discrepancy of insulin response to peroral and intravenous sugar administration is explained by assuming that the glucose injected directly into the blood stream furnishes a more powerful stimulant to the pancreas than the ingested sucrose. The advantages of this test for the evaluation of the clinical picture of diabetes are urged. W. A. P.</p>																																																			
<p>ASB-51A METALLURGICAL LITERATURE CLASSIFICATION</p>																																																			

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Processes and Properties Help

Intermediate metabolism in the administration of amino acids. II. The influence of glycine upon some manifestations of diabetes. A. L. Yudeles, I. B. Shulutko and D. A. Koretskii. *Arch. sci. biol. (U. S. S. R.)* 40, No. 3, 119-23 (in English 123) (1938); cf. C. A. 31, 39727. — A small transient drop of the blood and urine sugar was observed in a few cases. Symptomatic improvement was noted in one case treated continuously for a long period with glycine. No insulin-like action of glycine was observed. W. A. Perlzweig

ASW-SLA METALLURGICAL LITERATURE CLASSIFICATION

116

Lipemia in diabetes mellitus. I. B. Shul'ka and N. A. Sveshnikova. *Problemy Endokrinol.* 4, No. 4, 91 (1939).— In severe cases of diabetes changes of sugar in the blood and urine are not as great as the change of lipoids in the blood. During fasting the lipid level in the blood is higher in such diabetics than in normal persons. Twenty units of insulin depress the lipid level when given during fasting. One cc. of 1:1000 adrenaline soln. raises the fasting level of lipoids in the blood of both diabetics and normal persons. Cod-liver oil raises the fasting level of lipoids in the blood of diabetics more than that of normal persons. These significant changes of lipoids are not strictly paralleled by changes of sugar in blood and urine. C. S. Shapiro

SHULUTKO, I. B.

20090 SHULUTKO, I. B. K Klinike i terapii tyazhelykh form nefritov. Bvachev.
delo, 1949, No. 6, stb. 515-20.

SO: LETOPIS ZHURNAL STATEY, Vol. 27, Moskva, 1949.

SHULUTKO, I.; MEDVEDEVA, T.; MATROSOVICH, D.

Involvement of the gallbladder in gastroduodenal ulcers.
Klin. med., Moskva 29 no.8:42-44 Aug 1951. (CLML 20:11)

1. Of the First Department of Internal Diseases (Head --
Honored Worker in Science Prof. Ya. A. Lovtskiy), State
Order of Lenin Institute for the Advanced Training of
Physicians imeni S. M. Kirov.

SHULUTSO, I. B., Professor, TOLMACH D. V. (1911-1980) SHEKLOVSKY, A. V. (1911-1980)

Preparation for treating peptic ulcers Vrach.delo no. 11 9004800 1980
USSR, 1980

1. Review for literature search: (1911-1980) I. B. Shulutsa
Leningradskiy meditsinskoye institut
(PEPTIC ULCER) (NERVOUS SYSTEM, SYMPATHETIC)

SHULUTKO, I.B., prof.

Treatment of gastric and duodenal ulcers with ganglion-blocking agents [with summary in English]. Terap.arkh. 31 no.3:9-13 Mr '59. (MIRA 12:4)

1. Iz kafedry gosspital'noy terapii Kalininskogo meditsinskogo instituta.

(PEPTIC ULCER, ther.

1,6-dimethylpipercolic acid deriv. (Rus))

(PIPERIDINES, ther. use,

1,6-dimethylpipercolic acid deriv. in peptic ulcer (Rus))

SHULUTKO, I.B.; TOLMACH, D.V.; SHKLOVSKAYA, Ye.N.

Treatment of peptic ulcer of the stomach and duodenum with dioquine.
(MIRA 15:1)
Khim. i med. no.15:102-106 '60.

1. Iz kafedry fakul'tetskoy terapii (zav. kafedroy - prof. I.B.
Shulutko) Stalinskogo meditsinskogo instituta imeni A.M.Gor'kogo.
(PEPTIC ULCER) (DIOQUINE THERAPEUTIC USE)

SHULUTKO, I.B., prof.

Some considerations concerning better training of postgraduate
students in a therapeutical clinic. Biul. Uch.med. sov. 3 no.2:
20-21 Mr-Ap '62. (MIRA 15:4)

(MEDICINE--STUDY AND TEACHING)

SHULUTKO, I.B., prof.

Diuretic effect of allacyl. Kaz.med.zhur. no.1:27-28 Ja-F'63.
(MIRA 16:8)

1. Kafedra gospiatal'noy terapii Kalininskogo meditsinskogo
instituta.

(DIURETICS AND DIURESIS) (AMINOMETRADINE)

□

SHULUTKO, I.B., prof.

Second Scientific Conference of Therapists of the Northwest
Provinces of the R.S.F.S.R. Terap. arkh. 35 no.5:113-114 My'63
(MIRA 16:12)

SHUMUTO, I.R.

Effect of nitrocell in engine pistons. *AME. 1* red. no. 16:29-37
(MERA 17:8)

SHULUTKO, I.B., prof.

Treatment of angina pectoris with the antispastic preparation
erinit. Trudy KGMI no.10:221-225 '63.

(MIRA 18:1)

1. Iz kafedry gosspital'noy terapii (zav. kafedroy - prof. I.B.
Shulutko) Kalininskogo gosudarstvennogo meditsinskogo instituta.

SHULUTKO, L.I., professor, zasluzhennyy deyatel' nauki Tatarskoy ASSR.
(Kazan')

Prevention of agricultural trauma in machine-tractor station
workers. Sov. med. 18 no.10:36-37 0 '54. (MLRA 7:11)

(ACCIDENTS,

agriculture, prev. & control in Russia)

(AGRICULTURE,

accid., prev. & control in Russia)

SHULUTKO, L.I.

AID P - 1493

Subject : USSR/Medicine

Card 1/1 Pub. 37 - 8/19

Author : Shulutko, L. I., Prof., "Honored scientist" of the
Tatar ASSR

Title : Role of medical and epidemiological stations in the
prophylaxis of traumatic injuries in agriculture

Periodical : Gig. i san., 2, 39-42, F 1955

Abstract : Discusses measures for preventing injuries among
agricultural workers. With the mechanization of farm
work, traumatic cases become more frequent. Therefore
the author gives recommendations for the improvement
of medical service in rural localities, and enumerates
its main tasks.

Institution: None

Submitted : Je 28, 1954

SHULUTKO, Lazar' Il'ich

[Intramedullary nailing] Ob intrameduliarnom metallicheskom
osteosinteze. Kazan', Tatknigoizdat, 1957. 14 p.

(MIRA 13:4)

(INTERNAL FIXATION IN FRACTURES)

SHULUTKO, L.I.

"Prevention of accidents and the organization of emergency care" by
S.I.A. Freidlin. Reviewed by L.I. Shulutko. Zdrav.Rus.Fed. 1 no.7:
29-31 J1 '57. (MIRA 12:12)

(ACCIDENTS--PREVENTION)

SHULUTKO, L.I., prof. (Kazan')

"Problems in using plastics in medicine"; collection of articles
edited by N.N.Priorov [chlen-korrespondent AMN SSSR, zaslužennyy
deyatel' nauki, prof.]. Reviewed by L.I.Shulutko. Ortop.travm. i
protez. 18 no.6:53-56 N-D '57. (MIRA 11:4)
(PLASTICS) (PROSTHESIS) (PRIOROV, N.N.)

SHULUTKO, L.I., prof.

Professor M.O. Fridland; on his 70th birthday. Ortop.travm. i
protez. 19 no.4:81-82 JI-Ag '58 (MIRA 11:11)
(FRIDLAND, MIKHAIL OSIPOVICH, 1888-)

SHULUTKO, L.I., prof. zasluzhennyy deyatel' nauki TASSR (Kazan')

Some impressions from a visit to the People's Bulgaria.
Ortop.travm. i protez. 19 no.5:98-101 S-O '58 (MIRA 11:12)
(BULGARIA--ORTHOPEDICS)

SHULUTKO, L.I., prof. (Kazan')

"Voprosy travmatologii i ortopedii," no.4. Reviewed by L.I. Shulutko.
Ortop. travm. protez., Moskva 19 no.6:86-87 N-D '58. (MIRA 12:1)
(OR"HOPEDIA)

SHULUTKO, L.I., prof.; TARNOPOL'SKIY, Ya.I., kand.med.nauk

Organization of measures to control agricultural injuries under the
new conditions. Sov.med. 23 no.8:132-135 Ag '59. (MIRA 12:12)

1. Iz Kazanskogo nauchno-issledovatel'skogo instituta travmatologii i
ortopedii (dir. - prof. L.I. Shulutko).
(AGRICULTURAL WORKERS wounds & inj.)

SHULUTKO, L.I., prof. (Kazan')

All-Union Conference of Surgeons, Traumatologists, and
Anesthesiologists. Khirurgiia 35 no.2:118-120 F '59.
(MIRA 12:5)

(SURGERY--CONGRESSES)

SHULUTKO, L.I., prof. (Kazan')

International Congress of Orthopedists in Prague. Kaz.-med.
zhur. 40 no.2:95-97 Mr-Apr '59. (MIRA 12:11)
(ORTHOPEDIA--CONGRESSES)

SHULUTSKO, L. I., Kazan', Dep. of the Russian Acad. of Sciences, Moscow, U.S.S.R.

"Problems of Bone Graft Surgery in Bridging Longitudinal Defects from Loss of Bone Substance."

report submitted for the Eighth Congress, Intl. Society of Surgery (Orthopedic) and Traumatology, New York, N.Y., 4-10 Sep 60.

SHULUTKO, L.I., prof.; TARNOPOL'SKIY, Ya.I., kand.med.nauk

Prevention of industrial accidents in the petroleum industry of the
Tatar A.S.S.R. Kaz.med.zhur. no.5:74-77 S-0 '60. (MIRA 13:11)

1. Iz Kazanskogo nauchno-issledovatel'skogo instituta travmatologii
i ortopedii.

(TATAR A.S.S.R.--PETROLEUM INDUSTRY AND TRADE--ACCIDENTS)

KHARITONOV, I.F., doktor med.nauk (Kazan'); RATNER, Yu.A., prof. (Kazan');
SHUBIN, V.N., prof. (Kazan'); SHULUTKO, L.I., prof. (Kazan');
ROZENGARTEN, M.Yu. (Kazan')

Twenty-seventh All-Union Congress of Surgeons. Kaz.med.zhur. no.5:
96-99 S-O '60. (MIRA 13:11)
(SURGERY--CONGRESSES)

SHULUTKO, L.I., prof. (Kazan')

Problem of scoliosis at the Second International Congress of
Orthopedists. Kaz. med. zhur. no.6:74-76 N-D '60. (MIRA 13:12)
(ORTHOPEDIA—CONGRESSES) (SPINE—ABNORMITIES AND DEFORMITIES)

SHULUTKO, L.I., zasluzhennyi deyatel' nauki, prof.; TARNOPOL'SKIY, Ya.I.,
kand.meditsinskikh nauk

Basic principles in the prevention of agricultural injuries under
new conditions. Ortop. travm. i protez, 21 no. 7:66-71 J1 '60.
(MIRA 13:10)

1. Iz Kazanskogo nauchno-issledovatel'skogo instituta travmatologii
i ortopedii (dir. - prof. L.I. Shulutko).
(AGRICULTURE--ACCIDENTS)

SHULUTKO, L.I.

Our method for the treatment of ankylosing spondylo-arthritis.
Acta chir. orthop. traum. cech. 27 no.2:172-177 1960
(SPONDYLITIS ANKYLOSING surg.)

SHULUTKO, L.I.

Surgical treatment of scoliosis. Khirurgiia 36 no.6:13-17 Je '60.
(MIRA 14:3)

(SPINE—SURGERY)

SHULUTKO, L.I., prof. (Kazan')

Conservative treatment of fresh closed bone fractures. Ortop.,
travm.i protez. no.7:14-18 '61. (MIRA 14:8)
(FRACTURES)

SHULUTKO, L.I. prof. (Kazan')

We are intensifying the fight against agricultural tranuatism. Med.
sestra 20 no.7:42-44 J1 '61. (MIRA 14:10)
(AGRICULTURE--ACCIDENTS)

SHULUTKO, L.I., prof. (Kazan')

Second International Congress on Rehabilitation. Kaz.med. zhur.
no.2:89-93 Mr-Apr'63 (MIRA 16:11)

MEDVEDEV, N.P., prof. (Kazan'); SHULUTKO, L.I. prof. (Kazan').

Second All-Russian Congress of Surgeons. Kaz.med. zhur. No.2:
93-97 Mr-Ap'63 (MIRA 16:11)

*

SHULUTKO, L.I. (Kazan')

Review of B.Sh. TSeterelli's book "Agricultural traumatism
in the Georgian S.S.R. and measures for its control."
Sovet. zdravookhr. 5:81-84 '63 (MIRA 17:2)

SHULUTKO, L.I., prof. (Kazan'); BLOKHIN, V.N., dotsent (Moskva)

Second International Congress on Rehabilitation, Dresden,
June 11 to 15, 1962. Ortop., travm. i protez. 24 no.3:91-94
Mr '63. (MIRA 17:2)

SHULUTKO, L.I., prof. (Kazan', ul. Zhukovskogo, d.28, kv.27)

Problem of metal osteosynthesis. Ort. travm. i protez. 23
no.10:3-10 O '62. (MIRA 17:10)

SHULUTKO, I.I., prof. (Kazan', ul. Zhukovskogo, d.23, kv.27)

Defectiv posture and scoliosis. Ortop., travm. i protez. 25
no.5:56-60 My '64. (MIRA 18:4)

VOLKOV, M.V. (Moskva); SHULUTKO, I.I. (Kazan')

Ninth International Congress on Orthopedic Surgery and Traumatology.
Ortop., travm. i protez. 25 no.5:84-89 My '64.

(MIRA 18:4)

ZATSEPIN, S.I., kand. med. nauk; SHULUTKO, L.I., prof., zasluzhennyi deyatel'
nauki (Kazan')

Reports. Ortop., travm. i protez. 26 no.7:82-91 J1 '65. (MIRA 18:7)

DEPP, M.Ye., starshiy nauchnyy sotrudnik; SHULUTKO, L.S., nauchnyy sotrudnik

Preservation and transfusion of blood enriched with oxygen. Akt.vop.
perel.krovi no.4:77-78 '55. (MIRA 13:1)

1. Laboratoriya stabilizatsii krovi Leningradskogo instituta pereli-
vaniya krovi (zav. laboratoriyey - starshiy nauchnyy sotrudnik M.Ye.
Depp).

(BLOOD--TRANSFUSION) (OXYGEN)

SHULUTKO, I.S., nauchnyy sotrudnik

Treatment of slow healing ulcers with blood preparations. Akt.vop.
perel.krovi no.4:167-169 '55. (MIRA 13:1)

1. Khirurgicheskaya klinika Leningradskogo instituta perelivaniya
krovi (nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR, prof.
A.N. Filatov).

(BLOOD AS FOOD OR MEDICINE)

(TIBIA--ULCERS)

SHULUTKO, L.S.

Studies on the survival of transfused blood in the blood stream of the recipient.[with summary in English, p.61] Probl.gemat. i perel. krovi 2 no.6:45-50 N-D '57. (MIRA 11:2)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta perelivaniya krovi (dir. - dots. A.D.Belyakov, nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. A.N.Filatov)
(BLOOD TRANSFUSION,
adaptability of transfused blood (Rus))

COUNTRY :USSR T
 CATEGORY :Human and Animal Physiology, Blood
 ABS. JOUR. : RZhBioL., No. 5 1959, No. 21959
 AUTHOR :Shulutko, L.S.
 INST. :
 TITLE :The Effect of the Preservation Media and Storage
 Period of Preserved Blood on Erythrocyte Survival
 in the Blood Stream of the Recipient.
 ORIG. PUB. :V sb.: Aktual'n. vopr. pereliv. krovi. Vyp. 5.,
 Leningrad, 1957, 45--51
 ABSTRACT : The life-span of transfused erythrocytes in
 164 recipient rabbits was the object of the in-
 vestigation. The erythrocytes were labelled by
 injecting Fe⁵⁹, S³⁵ or Cl¹⁴ intravenously into the
 donor rabbits. Blood taken from 40 donor rabbits
 was preserved in different stabilizers for varying
 periods of time. The radioactivity of the blood of
 the recipient rabbit immediately after the trans-
 fusion was taken as 100%. The subsequent release
 of the transfused blood into the general circula-
 tion was determined as the ratio of the activity
 1/5
 Card:

T-36

COUNTRY	: USSR	T
CATEGORY	:	
ABG. JOUR.	: RZhSic1., No. 5 1959, No. 21959	
AUTHOR	:	
INST.	:	
TITLE	:	
ORIG. PUB.	:	
ABSTRACT	: of the blood at a given moment to the activity determined immediately after the transfusion. The stabilizers employed were solutions of glucose and citrate, glucose, citrate and antiseptics, citrate with alcohol and sugar additives. When fresh blood was transfused, the maximal rise in relative activity of the transfused blood in the general circulation of the recipient rabbit was detected after 2 hours and attained a value of 113% in relation to the initial activity; at 7 hours after the transfusion it had fallen to 100%. When the transfused blood had been stored for 5 days, the	
Card:	2/5	

COUNTRY : USSR

T

CATEGORY :

ABSTRACT JOUR. : RZhBiol., No. 5 1959, No. 21959

AUTHOR :

INST. :

TITLE :

ORIG. PUB. :

ABSTRACT

:rise in activity reached 105% of the initial value; 7 hours after the transfusion it had fallen to 80%. Including antiseptics in the preservation medium was without effect on the survival of the transfused blood. When blood from the same donor animals was used, but stored in solutions containing alcohol (no. 310), the maximal rise in relative activity of the transfused blood came to 128% of the initial level; at 7 hours after the transfusion it was 108%. The corresponding value for blood from the same donors stored in non-alcoholic solutions was 102%. Examination of blood stored in

Card:

3/3

T-37

T

COUNTRY : USSR
CITESECT :

ABST. JOUR. : RZhBiol., No. 5 1959, No. 21959

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : alcohol-containing media showed 80% survival of erythrocytes 24 hours after transfusion, 60% at 5 days, 50% at 10 days and 30% at 20 days. The corresponding values for erythrocyte survival were 70, 50, 45 and 20%, when the transfused blood was stored in media not containing alcohol. Observations of 25 patients receiving 200 to 400 ml of blood stored in media L-6 and 31^e showed a relationship between the length of time the blood was stored and its survival: 90% erythrocyte survival was assured in 5-day-old blood on the first day following the transfusion; with 20-day-old

Card:

4/5

COUNTRY : USSR
CATEGORY :

T

ABR. JOUR. : RZhBiol., No. 5 1959, No. 21959

AUTHOR :
INST. :
TITLE :

ORIG. PUB. :

ABSTRACT : blood the value was 60%, and for 25 to 30-day-old blood it was 30%. Erythrocytes of blood stored for 10 days in L-6 medium were detected in the recipient's blood after 65 days, while erythrocytes of blood stored for 30 days were completely destroyed 48 hours after the transfusion. Blood stored in medium 31^e for 45 days showed the same survival pattern as blood kept in medium L-6 for 30 days.--M.I.Yershovich

Card: 5/5

T-38

SHULUTKO, L. S., Candidate Med Sci (diss) -- "The effect of the composition of the preservative solutions and the preservation time of blood on the viability of the erythrocytes of transfused blood in the system of the recipient (Experimental investigation using radioactive indicators)". Leningrad, 1959. 12 pp (State Order of Lenin Inst for the Advanced Training of Physicians im S. M. Kirov), 200 copies (KL, No 25, 1959, 143)

SHULUTKO, L.S., nauchnyy sotrudnik

Procurement of blood by visiting blood collectors. Akt.vop.perel.krovi
(MIRA 13:1)
no.7:63-67 '59.

1. Otdel zagotovki krovi Leningradskogo instituta perelivaniya krovi
(zav. otделom - starshiy nauchnyy sotrudnik Ye.V. Antonova).
(BLOOD--COLLECTION AND PRESERVATION)

AKKERMANN, V.V.; TUKACHINSKIY, S.Ye.; TEODOROVICH, V.I.; CHERNOMORDIK, B.L.;
MOISEYEVA, V.P.; LUSANOVA, I.S.; SHULUTKO, L.S.; KURALEVA, V.V.;
SOKOLOVA, T.S.

Some morphological and functional properties of the blood in
patients with essential polycythemia. Probl.gemat.i perel.
krovi 6 no.4:30-33 Ap '61. (MIRA 14:6)

1. Iz Leningradskogo ordena Trudovogo Krasnogo Znameni nauchno-
issledovatel'skogo instituta perelivaniya krovi (dir. - dotsent
A.D. Belyakov, nauchnyy rukovoditel' - chlen-korrespondent
AMN SSSR prof. A.N. Filatov).
(POLYCYTHEMIA) (BLOOD)

TEODOROVICH, V.I.; SHULUTKO, L.S.

Use of plastic bags for the preparation and preservation of blood components. Probl. gemat. i perel. Krovi 8 no.9:32-34 S '63.
(MIRA 17:9)

1. Iz Leningradskogo ordena Trudovogo Krasnogo Znameni nauchno-issledovatel'skogo instituta perelivaniya krovi (dir. - dotsent A. D.Belyakov, nauchnyy rukovoditel' - chlen-korrespondent AN SSSR prof. A.N.Filatov).

SHULUTKO, M. L.

SHULUTKO, M. L. -- "Extrapleural Pneumothorax in Treating the Cavernous Forms of Pulmonary Tuberculosis in Children and Adolescents." Acad Med Sci USSR. Sverdlovsk City Children's Tuberculosis Sanatorium No. 1. Sverdlovsk, 1955. (Dissertation for the Degree of Candidate of Medical Sciences.)

SO: Knizhnaya letopis', No. 4, Moscow, 1956

SHULUTKO, M.L.; YELOKHINA, M.L.

Surgical treatment of hypostatic abscesses in tuberculous spondylitis.
Khirurgiia 32 no.6:62-65 Ja '56. (MLRA 9:10)

1. Iz Sverdlovskogo detskogo tuberkuleznogo sanatoriya No.1 (i.o. glavnogo vracha K.D.Skovortsov) i kafedry gosital'noy khirurgii (zav. - chlen-korrespondent AMN SSSR zasluzhennyy deyatel' nauki prof. A.T.Lidskiy) Sverdlovskogo meditsinskogo instituta
(TUBERCULOSIS, SPINAL, compl.
hypostatic abscess, surg.)
(ABSCESS, etiol. and pathogen.
tuberc., spinal, surg.)

GANAGO, F.M.; SHULUTKO, M.L.

Treatment of pulmonary tuberculosis with extrapleural pneumothorax
in children and adolescents. Probl.tub. 34 no.3:37-42 My-Je '56.

(MLRA 9:11)

1. Iz khirurgicheskogo otdeleniya (zav. M.L.Shulutko) Sverdlovskogo
gorodskogo detskogo tuberkuleznogo sanatoriya No.1 (i.o.glavnogo
vracha K.I.Skvortsov)

(PNEUMOTHORAX, ARTIFICIAL, in inf. and child
in child.& adolescents)

SHULUTKO, M.L., kandidat meditsinskikh nauk

Pneumonectomy in therapy of tuberculosis in children and adolescents
[with summary in English]. Khirurgiya 33 no.4:85-89 Ap '57.

(MIRA 10:7)

1. Iz legochno-khirurgicheskogo otdeleniya (zav. M.L.Shulutko)
Sverdlovskogo detskogo tuberkuleznogo sanatoriya i gospi'tal'noy
khirurgicheskoy kliniki (zav. - chlen-korrespondent AMN SSSR
zasluzhennyy deyatel' nauki prof. A.T.I'dskiy) Sverdlovskogo
meditsinskogo instituta

(TUBERCULOSIS, PULMONARY, in inf. and child
pneumonectomy, in child. & adolescents)

(PNEUMONECTOMY, in inf. and child
in pulm. tuberc. in child. & adolescents)

SHULUTKO, M.L., kandidat meditsinskikh nauk

Pulmonary resection in treating tuberculosis in children and adolescents [with summary in French]. Probl.tub. 35 no.2:32-38 '57. (MIRA 10:6)

1. Iz legochno-khirurgicheskogo otdeleniya (zav. M.L.Shulutko) Sverdlovskogo detskogo tuberkuleznogo sanatoriya No.1 (dir. K.I. Skvortsov).

(PNEUMONECTOMY, in various dis.
tuberc., pulm., in child. & adolescents (Bus))

LIDSKIY, A.T., prof. (Sverdlovsk, Bankovskiy per., d.8, kv.31); SHELOMOVA,
T.P., kand.med.nauk; SHULUTKO, M.L., kand.med.nauk

Some problems in lung surgery. Vest.khir. 79 no. 9:110-120 S '57.
(MIRA 10:11)

1. Iz gosspital'noy khirurgicheskoy kliniki (zav. - prof. A.T.Lidskiy)
Sverdlovskogo meditsinskogo instituta i khirurgicheskogo otdeleniya
Sverdlovskogo gortubdispansera.
(LUNGS, surg.
review)

SHULUTKO, M.I., kand.med.nauk

Surgical treatment of pulmonary tuberculosis in children and adolescents [with summary in English]. Vest.khir. 80 no.3:16-23
Mr '58. (MIRA 11:4)

1. Iz legochno-khirurgicheskogo otdeleniya (zav. - M.I.Shulutko, nauchnyy rukovoditel' prof. A.T.Lidskiy) Sverdlovskogo detskogo tuberkuleznogo sanatoriya No.1. Adres avtora: Sverdlovsk, 30, detskiy tuberkuleznyy sanatoriy No.1, d.33.

(TUBERCULOSIS, PULMONARY, surg.

methods in cavernous tuberc. in child. & adolescents
(Rus))

SHULUTKO, M.L. kand.med.nauk; SHIRYAK, M.I.

Conservative partial resection of the lung in the treatment of tuberculosis. Probl.tub. 37 no.4:50-52 '59. (MIRA 12:10)

1. Iz legochno-khirurgicheskogo otdeleniya (zav. M.L.Shulutko, nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR, zasluzhennyy deyatel' nauki prof.A.T.Lidskiy) Sverdlovskogo detskogo tuberkuleznogo sanatoriya No.1 (glavnyy vrach Ye.A.Korol').

(TUBERCULOSIS, PULMONARY, surg.

conservative partial resection (Rus))

SHULUTKO, M.L., kand.med.nauk (Sverdlovsk, Bankovskiy per., d.8, kv.31)

Bilateral consecutive pneumonectomy in treatment of tuberculosis
[with summary in English]. Vest.khir. 82 no.1:55-61 Ja '59.
(MIRA 12:2)

1. Iz legochno-khirurgicheskogo otdeleniya (zav. - M.L. Shulutko,
nauchn. rukovod. - prof. A.T. Lidskiy) Sverdlovskogo detskogo tuber-
kuleznogo sanatoriya No.1

(PNEUMONECTOMY, in various dis.

bilateral consecutive in pulm. tuberc. (Rus))

SHULUTKO, M.L., kand.med.nauk; ZISLIN, B.D.

Complications and causes of ineffective resection of the lungs
in patients with tuberculosis. Khirurgiia 36 no.12:97-104 '60.
(MIRA 14:1)

1. Iz legochno-khirurgicheskikh otdeleniy Sverdlovskogo detskogo
tuberkuleznogo sanatoriya No.1 (glavnyy vrach Ye.A. Korol') i
gorodskogo tuberkuleznogo dispansera (glavnyy vrach Z.P. Kunitsyna).
Nauchnyy rukovoditel' otdeleniy - chlen-korrespondent AMN SSSR
zasluzhennyy deyatel' nauki prof. A.T. Lidskiy.
(LUNGS—SURGERY)

SHULUTKO, M.L.; PANFILOVA, G.A.

Resection of the lung in patients with primary tuberculosis.

Probl.tub. 38 no.1:79-85 '60.

(MIRA 13:10)

(LUNGS—SURGERY)

SHULUTKO, M. L., kand. med. nauk

Results of surgical interventions on adolescents with disseminated tuberculosis of the lungs. Probl. tub. no.2:20-24 '62.
(MIRA 15:2)

1. Iz legochno-khirurgicheskogo otdeleniya (rukovoditel' - kandidat meditsinskikh nauk M. L. Shulutko) Sverdlovskogo instituta tuberkuleza (dir. - prof. I. A. Shaklein) i detskogo tuberkuleznogo sanatoriya No. 1 (glavnyy vrach Ye. A. Korol')

(TUBERCULOSIS) (LUNGS—SURGERY)

SHULUTKO, M.L., kand.med.nauk; PANFILOVA, G.A., kand.med.nauk

Intrathoracic interventions in primary tuberculosis in children and adolescents. Probl. tub. 40 no.6:31-35'62

(MIRA 16:12)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta tuberkuleza (dir. - prof. I.A. Shaklein, zamestitel' direktora po nauchmoy chasti - kand. med. nauk N.G.Butkin).

PEREL'MAN, M.I. (Novosibirsk, Akademgorodok, 2-V, kv.7); SHULUTKO, M.L.

Characteristics of the technique of surgical interventions
in primary pulmonary tuberculosis. Vest. khir. 92 no.2:
47-50 F '64. (MIRA 17:9)

1. Iz legochnogo otdeleniya (zav.-dotsent M.I. Perel'man)
Instituta eksperimental'noy biologii i meditsiny (dir.-
prof. Ye.N. Meshalkin) Sibirskogo otdeleniya Akademii nauk
SSSR i khirurgicheskogo otdeleniya (zav.-starshiy nauchnyy
sotrudnik M.L. Shulutko) Sverdlovskogo nauchno-issledovatel'-
skogo instituta tuberkuleza (dir.- prof. I.A. Shakleyn).

SHULUTKO, M.L., doktor med. nauk; ZISLIN, B.D., kand. med. nauk; KIPIANI, N.M.

Some problems of bilateral pulmonary resection in tuberculosis.
Prob. tub. no.1:26-31 '65. (MIRA 18:12)

1. Sverdlovskiy nauchno-issledovatel'skiy institut tuberkuleza
(dir.- prof. I.A. Shaklenya) i gorodskoy protivotuberkuleznyy
dispanser (glavnyy vrach Ye.S. Gubina).

L 26369-005 PWD: /EST(m)/EDC(m)-0/T RM/WH

ACC NR: AP601119

(A)

SOURCE CODE: UR/0413/66/000/006/0022/0022

INVENTOR: Soskind, A. S.; Shulutko, R. I.

ORG: none

TITLE: A method for fireproofing cellulose materials. Class 8, No. 179746

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 6, 1966, 22

TOPIC TAGS: cellulose, fire resistant material, titanium compound, antimony compound

ABSTRACT: This Author's Certificate introduces a method for fireproofing cellulose materials by the application of titanium-antimony compounds with subsequent treatment. The final treatment consists of rinsing in water to simplify the technical process and improve the quality of the resultant fireproof material.

SUB CODE: 11/

SUBM DATE: 08May63/

ORIG REF: 000/

OTH REF: 000

UDC: 677.46.021.921.2:678.

.029.65:546.863-31.824

Card 1/1 *ce*

SHUL'VAS, M.D.

27

slag inclusions in ferrous alloys. Yu. E. Lukashevich-Duvanova and M. D. Shul'vas. Repts. Central Inst. Metall. Leningrad No. 10, 210-211 (1955); cf. C. A. 30, 7867. - Methods of sepg. slag inclusions from ferrichrome (I) and ferromanganese (II) are given. Inclusions in I amount to 0.001-1.80% and consist of silicate, oxides of Cr and Al and chrome spinel. In II, the inclusions amount to 0.2% and consist of alumina, silicate and crystals of TiO₂. B. Z. Kamich

YU. T. LUKASHEVICH -
DUVANOVA

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

SOV/137-58-10-21785

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 189 (USSR)

AUTHOR: Shul'vas, M. D.

TITLE: Determination of Aluminum Sulfides in Steel (Opredeleniye sul'fidov alyuminiya v stali)

PERIODICAL: Tr. Nevsk. mashinostroit. z-da, 1957, Nr 2, pp 74-75

ABSTRACT: The specimen is dissolved electrolytically in a hermetically sealed electrolyzer in a CO_2 atmosphere while it is suspended on a Pt, W, or Mo wire which acts as the anode. After the specimen is attached to the Pt wire, 1% NaCl, 0.1% HCl, and 0.3% $\text{KNaC}_4\text{H}_4\text{O}_6$ solutions are poured into the electrolyzer and CO_2 is passed through. The specimen is dissolved at a current density of 0.02 amp/cm² during 3 - 4 hours depending upon the sulfide content in the steel. In the process of electrolytic dissolution of steel only the Al sulfides are decomposed. After the electrolysis is completed the specimen is removed, 30 - 50 mg of HCl are added to the electrolyte, and S is determined volumetrically. The Al sulfide content in the steel is determined by multiplying the amount of S found by 1.56 and referring it to the weight of the dissolved portion

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SOV/137-58-10-21785

Determination of Aluminum Sulfides in Steel

of the specimen. The dissolved specimen of steel is determined by the loss in weight of the specimen after its dissolution and its cleansing of the sediment. Moreover, the distribution of Al sulfides in the mass of the steel has a substantial significance. To determine this the author proposes the following treatment of macro and micro sections: Silver-bromide paper is treated with a solution containing 1% NaCl, 0.1% HCl, and 0.3% $\text{KNaC}_4\text{H}_4\text{O}_6$ and placed on a ground or polished surface of the section. Such a paper reacts only with Al sulfides, ensuring the selective determination of their presence and distribution in the steel.

A. M.

1. Aluminum sulfide---Determination
2. Steel---Analysis

Card 2/2

SOV/137-58-10-21788

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 190 (USSR)

AUTHOR: Shul'vas, M. D.

TITLE: Determination of Magnetic Iron Oxide in Sediments of Non-metallic Impurities (Opredeleniye magnitnoy okisi zheleza v osadke nemetallicheskih vklyucheniye)

PERIODICAL: Tr. Nevsk. mashinostroit. z-da, 1957, Nr 2, pp 81-82

ABSTRACT: For the determination of magnetite (Fe_3O_4) in the sediment of nonmetallic impurities (NI) a magnetic separator is used which is immersed into the beaker containing NI and moved over the bottom of the beaker. It is then removed and the magnetite is transferred into a beaker. For a complete separation of Fe_3O_4 from NI sediment this operation is repeated several times. The Fe_3O_4 is then treated with HCl (1:1) while heating to complete dissolution, and the Fe is determined in the solution by the colorimetric method.

1. Magnetic iron oxides--Determination
--Impurities

2. Metals

A. M.

Card 1/1

SHULVAS, M. L.

✓ Opređenje nemetallicheskih vkluchenij v zharoprock-
nykh stalyakh (The Determination of Non-Metallic In-
clusions in Heat-Resistant Steels). Compiled by M. L.
Shul'vas. Moscow: Mashgiz. 1955. 44 pp. r. l. 16.

PTB
MK

SHULVATIKOVA, N. V.

Fractionation of cellulose with cuprammonium solutions.
N. V. Shulyatikova and D. I. Mandel'baum. Zhur.
Prilad. Khim. (J. Applied Chem.) 24, 264-73(1951).
 Variation of the gross amt. of the cuprammonium soln. with low Cu concn. can be used as a basis for fractionation of cellulose, since the soln. of cellulose requires not only a particular concn. of Cu but also a certain total amt. of Cu soln. for formation of the Cu-cellulose complex. At 0° in air insol. portions are almost completely resistant to oxidative destruction by the cuprammonium soln. Fractions that are regenerated from soln. always show an increase of the degree of polymerization. A cellulose specimen is stirred 5-10 min. in an aq. medium, filtered by suction, air-dried to 7-9% H₂O, and a 1-g. sample is placed in a dark-glass vessel (500 ml.) and treated with the desired cuprammonium soln. for 2 hrs. at 0° with stirring; the insol. portion is filtered by suction and washed with 15% NH₄OH, H₂O, 10% AcOH, and H₂O and dried. The best cuprammonium soln. contains 0.25-0.26% Cu. The results of fractionation of several specimens in respect to mol. wt. distribution are given graphically. G. M. Kosolapoff

Ал 87, ШУЛУГУ, 2.1.

А. Г. Шулугу

Chemicommechanical lapping. Z. I. SHULUGU. *Stanki i instrumenty*, 13 [3] 26-27 (1944); *Тех. Дневн.-Рев.*, 3 [26] 148 (1945).—A lapping device for sintered carbide plates has been developed by the Russian State Optical Institute. By chemicommechanical action the cobalt bond of the sintered carbide is attacked, and the tungsten carbide grain is exposed. No heat is generated; hence no cracks develop, and waste is considerably reduced. For lapping, the sintered carbide plates are shellacked to a brass disk so that the faces to be lapped lie in one plane, no matter how thick the plates are. The lapping operation is speedily performed in a special machine of simple construction with a comparatively soft abrasive medium suspended in a 20 to 25% solution of CuSO_4 . 1 illustration. P.G.

2/056/62/043/004/055/061
B104/B186

$\pi\pi$ -interaction during multiple ...

$$\begin{aligned}\pi^- + p &\rightarrow 2\pi^- + \pi^+ + p + k\pi^0, & (3) \\ \pi^- + p &\rightarrow 3\pi^- + 2\pi^+ + p + k\pi^0 & (4)\end{aligned}$$

were excluded by identifying the protons from their momenta and by estimating the ionization. The numbers of possible combinations ($\pi^-\pi^+$, $\pi^+\pi^+$, $\pi^+\pi^-$, $\pi^-\pi^0$) as functions of the effective masses have sharp maxima at the mass values of 0.33, 0.44, 0.58, 0.76, 0.99. Evidently, there are resonances at these mass values in the systems with two pions. It is proved that one and the same pion is not involved in two maxima. It is concluded that in systems with equal mass values, but with different isotopic spins and mechanical spins, there exist two resonance systems. This means that in the case of strong interaction there is a degeneracy with respect to the two spins. There are 2 figures and 1 table.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki Akademii nauk SSSR (Institute of Theoretical and Experimental Physics of the Academy of Sciences USSR)

SUBMITTED: June 20, 1962

Card 2/2

S/056/63/044/002/004/065
B102/B186

AUTHORS: Aynutdinov, M. S., Zombkovskiy, S. M., Nikitin, S. Ya.,
Selektor, Ya. M., Shulyachenko, V. N.

TITLE: Multiple production of pions in 7.2 Bev π^-p collisions

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,
no. 2, 1963, 413-420

TEXT: The authors here continue previous investigations (ZhETF, 15:3, 1961) in which they had shown that the resonances observed in inelastic πp collisions (cf. e.g. Phys. Rev. Lett., 6, 624, 628, 1961) play an important part in multiple pion production. Now the angular and momentum distributions of pions and protons are investigated for inelastic π^-p interactions of various multiplicities. The resonances arising in three- and four-pion systems are also studied, and the results are compared with the statistical theory. The measurements were made in a liquid-hydrogen bubble chamber positioned in a magnetic field of 13.5 koe. The π^- beam was obtained from the inner Be target of a proton synchrotron. The mean beam energy was 7.2 Bev, the π^- momentum distribution was Gaussian with a
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S/056/63/044/002/004/065
B102/S186

Multiple production of pions ...

spectrum of π^{\pm} 0.8 BeV/c. A total of 13,000 emulsion plates were scanned, and among 1590 $\pi\pi$ interaction events found, there were 192 elastic ones. The mean multiplicity was ≈ 3.6 , i.e. there were 2-, 4-, 6- and 8-pronged stars with a percentage of 36.6, 49.3, 13.2, and 0.8%, respectively; the cross-sections were 10.0, 13.5, 3.6, and 0.2 mb. The total cross-section was $\sigma_{tot} = 31.0 \pm 3.1$ mb, and $\sigma_{el} = 3.90 \pm 0.54$, $\sigma_{inel} = 27.1 \pm 0.3$ mb.

For 2-, 4-, and 6-pronged stars in the c.m.s. the proton momentum distributions differ greatly, whereas the proton angular distributions and the π^{\pm} momentum distributions are more similar. The $\pi\pi$ -resonances arising in multiple pion production play the main role. It is assumed that in this process resonance states of three or four pions are formed, which decay into two or three pions. This is verified in determination of the effective masses of all possible combinations of charged pions for four-pronged stars and in an investigation of the existence of bound states with energies above 1 BeV. There are 12 figures and 2 tables.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki (Institute of Theoretical and Experimental Physics)

SUBMITTED: July 21, 1961
Card 2/2

AYNUTDINOV, M.S.; ZOMBKOVSKIY, S.M.; PLETNIKOV, A.A.; SELEKTOR, Ya.M.;
SHULYACHENKO, V.N.

Elastic scattering of 3.5 Bev./c π^- -mesons by protons. Zhur.
eksp. i teor. fiz. 45 no.2:392-394 Ag '63. (MIRA 16:9)

1. Institut teoreticheskoy i eksperimental'noy fiziki AN SSSR.
(Mesons--Scattering)

AYNUTDINOV, M.S.; ZOMBKOVSKIY, S.M.; SELEKTOR, Ya.M.; SHULYACHENKO, V.N.

Studying $\pi\pi$ -resonances in π -p-collisions at a primary
 π -meson momentum of 3.5 Bev/c. Zhur. eksp. i teor. fiz. 45
no.5:1682-1684 N '63. (MIRA 17:1)

1. Institut teoreticheskoy i eksperimental'noy fiziki.

ACCESSION NR: AP4042376

S/0056/64/047/001/0100/0106

AUTHORS: Aynutdinov, M. S.; Zombkovskiy, S. M.; Selektor, Ya. M.;
Shulyachenko, V. N.

TITLE: Inelastic interaction of 3.5-BeV/c negative pions with
protons

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 1, 1964, 100-106

TOPIC TAGS: inelastic scattering, negative pi meson, pion scatter-
ing, proton scattering, resonance scattering, bubble chamber

ABSTRACT: This investigation was motivated by the growing evidence
that the statistical theory cannot explain multiple production pro-
cesses in either pion proton or proton proton collisions. The nega-
tive pion beam from the ITEP proton synchrotron was momentum-analyzed
by a deflecting magnet, collimated, and directed to a liquid-hydrogen
bubble chamber of 25 cm diameter, placed in a 14 kOe field. Particu-

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ACCESSION NR: AP4042376

lar attention was paid to two-prong stars, that is, the reactions

	$\bar{p}^0(\pi^-)$	$\bar{p}^0(\pi')$	$\bar{p}_1(\pi^-)$	$\bar{p}_1(\pi')$
Двухлучевые звезды:	500 ± 15	450 ± 15	325 ± 50	345 ± 35
Четырехлучевые звезды:	380 ± 15	—	360 ± 40	—

The angular and momentum distribution of the secondary particles are presented. For the reaction $\pi^- + p \rightarrow \pi^- + \pi^+ + n$ there were observed two resonances with masses ~ 750 (ρ^0 meson) and ~ 1250 (f^0 meson) MeV. The angular distributions of the two reactions offer evidence in favor of the one-pion exchange mechanism. A hypothesis is advanced that simultaneous production of a ρ^0 meson and isobars with masses ~ 1300 MeV is possible. "The authors thank A. I. Alikhanov for numerous useful discussions, the mathematics group headed by R. S. Guter for the calculations, and the photograph scanning group headed by D. I. Tumanova and N. V. Vasil'yeva." Orig. art. has: 8 figures and 2 formulas.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki

2/3

ACCESSION NR: AP4042376

(Institute of Theoretical and Experimental Physics)

SUBMITTED: 19Feb64

ENCL: 00

SUB CODE: NP

NR REF SOV: 000

OTHER: 005

3/3

AYNUTDINOV, M.S.; ZOMBKOVSKIY, S.M.; SELEKTOR, Ya.M.; SHULYACHENKO, V.N.

Studying the reaction $\pi^- + p \rightarrow 2 \pi^- + 2 \pi^- + k \pi^0 + n$
at a momentum of primary π^- -mesons of 3.5 Bev./c. Zhur. eksp.
i teor. fiz. 47 no.1:383-385 J1 '64. (MIRA 17:9)

1. Institut teoreticheskoy i eksperimental'noy fiziki
Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii
SSSR.

AYNUTDINOV, M.S.; VASIL'YEVA, N.V.; ZOMBKOVSKIY, S.M.; SELEKOV, YU.N.;
SHULYACHENKO, V.M.

Study of four-pointed stars in π^+p -interactions at a primary
momentum of 3.5 GeV./s. IAd. fiz. 1 no.6:1071-1078 Je '65.
(MIRA 18:6)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarst-
vennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.

FORTUSHNYI, V. A., NOVIKOV, V. M. (Candidates of Veterinary Sciences) and SHULYAK
(Junior Scientific Co-Worker, Ukrainian Scientific Research Institute of Experimental
Veterinary Medicine)

"To study and disseminate leading experience of animal breeders and veterinary
specialists in the Ukrainian SSR"

Veterinariya, vol. 39, no. 7, July 1962 p. 24

SHULYAK, A.M., polkovnik med.sluzhby

Organization of help for the deaf in the armed forces. Voenn.
med.zhurn. no.12: 40-42 D'57 (MIRA 11:5)
(HEARING DISORDERS, therapy,
in armed forces personnel (Rus))
(ARMED FORCES PERSONNEL, dis.
hearing disord., organiz. of aid (Rus))

SHULYAK, B. A.

PA 35/49T79

USSR/Nuclear Physics - Cosmic Radiation Aug 48
Nuclear Physics - Counters, Elec-
tronic

"Generation of Cosmic Ray Showers Under Great Thick-
nesses of Lead at Various Heights," L. V. Kurnosova,
B. A. Shulyak, Phys Inst imeni P. N. Lebedev, Acad
Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXI, No 6

States results of investigations where counters were
used to determine the nature of particles found in
cosmic rays which are capable of producing showers
under thick slabs of lead. Submitted by Acad S. I.
Vavilov, 21 Jun 48.

35/49T79

SHULYAK, B.A.

Dynamics of sand microconfigurations in the coastal zone. Trudy
Inst. okean. 28:59-70 '58. (MIRA 11:5)
(Sand) (Seashore)

3.6000

AUTHOR:

Shulyak, B. A.

68978

S/020/60/131/02/016/071

B013/B011

TITLE:

On the Parameters of the Structure of a Deformable Bottom of an Undulatory Flow

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 2, pp 275 - 278 (USSR)

ABSTRACT:

The present paper deals with the investigation results of the dependence of the parameters of periodic microstructure (ripples) on the parameters of an undulatory flow and on the constants of fluids and particles. Furthermore, the author deals with the dependence of particle shift velocity and of the amount of the particle flux on the parameters of the undulatory flow. These investigations were made in a 15-meter wave trough with a cross section of 0.5·0.8 m at periods of 0.9 sec $\leq \tau_{\text{wave}} \leq$ 5.0 sec and for wave heights of

4cm $\leq h_{\text{wave}} \leq$ 20 cm with a depth of $H = 0.4$ m of the flow.

$v'_{\text{wave}} = \frac{h_{\text{wave}}}{2\pi \tau_{\text{wave}}} \frac{1}{2 \text{ sh } kH}$ holds with a rather fair accuracy.

Figure 1 shows the measured dependence of the height h_r and of the distance λ_r of the ripples on the flow parameters. In dimensionless

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On the Parameters of the Structure of a Deformable
Bottom of an Undulatory Flow

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quantities $\Pi = 7.24 \cdot 10^{-2} / \text{sh } kH$, $\Lambda = 4.02 \cdot 10^{-1} / \text{sh } kH$ is valid, where
 $\Pi = h_r / (h_{\text{wave}} + h_o)$; $\Lambda = \lambda_r (h_{\text{wave}} + h_o)$ and $h_o = v_o \tau_{\text{wave}} \text{sh } kH / \pi$.
 k denotes the wave number, and $v_o = 9.52$ cm/sec is a constant. The
above expressions (1) for Π and Λ describe all the ripple parame-
ters in their range of existence in water which is neither too deep
nor too shallow. Therefrom the relation $\lambda_r = 5.55 h_r$ results, which

holds at every phase and for every shape of the ripple. The last-
mentioned relation (2) does not depend on flow inhomogeneity and
instability and on standing waves. $\Pi \sim (d^3 q_T g / q_{\text{liq}} v^2)^n$ holds,

where q_{liq} - density of the liquid, g - gravitational acceleration,
 q_T - density of the particles. The exponent n may be determined by
experiment; with $n = 0.1$ the following holds:

$$\Pi = 4.14 \cdot 10^{-2} \left(\frac{d^3 q_T g}{q_{\text{liq}} v^2} \right)^{0.1} \frac{1}{\text{sh } kH} \quad \Lambda = 2.30 \cdot 10^{-1} \left(\frac{d^3 q_T g}{q_{\text{liq}} v^2} \right)^{0.1} \frac{1}{\text{sh } kH}.$$

The investigation performed by the author confirms G. H. Darwin's
opinion (Ref 2) concerning the role of vortices in the dynamics of

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On the Parameters of the Structure of a Deformable
Bottom of an Undulatory Flow

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the ripples. In the interaction mechanism of the flow of the deformed bottom there are two opposite processes. One of them is connected with the action of the vortex-like part of the flow. The other process depends on the action of the potential part of the flow and is caused by the separation of material from the ridges of the ripple. The stability of the particles on the ridge of the ripple increases with decreasing viscosity and density of the flow and with increasing weight of the particles. This stability decreases with increasing velocity. In an undulatory flow, the dependence of the velocity of ripple shift and particle flux of the deposits moved in the layer near the bottom is much more complicated than in a propagating flow. In this case, the integral particle flux Q_{wave} during one wave period consists of eight components. A rather voluminous expression is given for the experimental dependence of the particle flux on the period and the velocities per unit length of the wave front near the bottom. Next, an expression is given for the general form of the dependence of the ripple shift velocity on the parameters of the undulatory flow. These results permit the investigation of all the periodic forms of the undulatory and

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On the Parameters of the Structure of a Deformable
Bottom of an Undulatory Flow

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propagating flow from a uniform aspect. The author thanks
V. V. Longinov for supervising this work and G. I. Barenblatt for
his assistance and interest. There are 1 figure and 8 references,
4 of which are Soviet.

ASSOCIATION: Chernomorskaya eksperimental'naya nauchno-issledovatel'skaya
stantsiya Instituta okeanologii Akademii nauk SSSR (Black Sea Ex-
perimental Scientific Research Station of the Institute of Oceanology of the Academy of Sciences of the USSR) ✓

PRESENTED: September 11, 1959, by P. Ya. Kochina, Academician

SUBMITTED: August 15, 1959

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